

AFTER FINAL AMEND.

03/15/04 12:59 FAX 732 530 9808

MOSER PATTERSON SHERIDAN

005

Response to Office Action
Serial No. 10/053,296
Page 2 of 9

PLEASE
ENTER
KW
3/31/04.

IN THE CLAIMS

1-3. (Cancelled)

4. (Previously Presented) A semiconductor processing chamber comprising:
a chamber body having sidewalls and a bottom defining an interior volume;

a lid assembly coupled to the chamber body and movable between a first position enclosing the interior volume and a second position;

a hinge assembly coupled between the lid assembly and the chamber body, wherein the hinge assembly further comprises:

one or more mounting brackets coupled to the lid assembly;

a shaft coupled to the mounting brackets and coplanar with the upper surface of the chamber body; and

one or more bearing mounts rotatably coupled to the shaft; and

a motor coupled to the hinge assembly for moving the lid assembly between at least the first position and the second position.

5. (Previously Presented) The semiconductor processing chamber of claim 4, wherein the bearing mounts are coupled to the chamber body, a frame circumscribing the chamber body or a processing platform having the chamber body coupled thereto.

222038

Response to Office Action
Serial No. 10/053,296
Page 3 of 9

3/ 6. (Previously Presented) The semiconductor processing chamber of claim 4, wherein the lid assembly further comprises a target and a magnetron.

4/ 7. (Previously Presented) A semiconductor processing chamber comprising:
a chamber body having sidewalls and a bottom defining an interior volume;

a lid assembly coupled to the chamber body and movable between a first position enclosing the interior volume and a second position;

a hinge assembly coupled between the lid assembly and the chamber body;

a motor coupled to the hinge assembly for moving the lid assembly between at least the first position and the second position;

a plurality of first locating devices disposed between the lid assembly and the chamber body disposed proximate a shaft of the hinge assembly; and

a plurality of second locating devices disposed between the lid assembly and the chamber body, the second locating devices disposed outward of the first locating devices relative the shaft.

5/ 8. (Original) The semiconductor processing chamber of claim 7, wherein each of the first locating devices further comprises:
a pin and a bushing having a "C" shaped cross section.

6/ 9. (Original) The semiconductor processing chamber of claim 8, wherein each of the second locating devices further comprises:
a pin and a cylindrical bushing.

7/ 10. (Original) The semiconductor processing chamber of claim 8, wherein the pin is coupled to the lid assembly.

Response to Office Action
Serial No. 10/053,296
Page 4 of 9

11-12. (Cancelled)

- 8/ 13. (Previously Presented) A semiconductor processing chamber comprising:
- a chamber body having sidewalls and a bottom defining an interior volume;
 - a lid coupled to the chamber body and having a bottom movable between a first position enclosing the interior volume and a second position;
 - a target coupled to the bottom of the lid;
 - a first mounting bracket coupled to the lid assembly;
 - a shaft coupled to the first mounting bracket;
 - one or more bearing mounts rotatably coupled to the shaft;
 - a motor coupled to at least one of the shaft or first mounting bracket for moving the lid assembly between at least the first position and the second position;
 - a first bushing having a "C" shaped cross section disposed in the chamber body;
 - a first pin disposed between the lid assembly and the chamber body wherein a portion of the first pin mates with the first bushing;
 - a second bushing having a cylindrical cross section disposed in the chamber body outward of the first bushing relative to the shaft; and
 - a second pin disposed between the lid assembly and the chamber body wherein a portion of the second pin mates with the second bushing.

- 9/ 14. (Previously Presented) The semiconductor processing chamber of claim 13, wherein the shaft is coplanar with the upper surface of the chamber body.

222038

Response to Office Action
Serial No. 10/053,296
Page 5 of 9

10 15. (Previously Presented) The semiconductor processing chamber of claim 13, further comprising:

- a second mounting bracket coupled to the lid assembly and the shaft; and
- a brace coupled between the first and second mounting brackets.

11 16. (Original) A physical vapor deposition chamber comprising:
a chamber body having sidewalls and a bottom defining an interior volume;

- a lid coupled to the chamber body and having a bottom movable between a first position enclosing the interior volume and a second position;

- a target coupled to the bottom of the lid;

- one or more mounting brackets coupled to the lid assembly;

- a shaft fixed to the mounting brackets;

- one or more bearing mounts disposed on the chamber body and rotatably coupled to the shaft;

- a motor coupled to at least one of the shaft or mounting brackets for moving the lid assembly between at least the first position and the second position;

- a first bushing having a "C" shaped cross section disposed in the chamber body;

- a first pin disposed between the lid assembly and the chamber body wherein a portion of the first pin mates with the first bushing;

- a second bushing having a cylindrical cross section disposed in the chamber body outward of the first bushing relative to the shaft; and

- a second pin disposed between the lid assembly and the chamber body wherein a portion of the second pin mates with the second bushing.

17 17. (Previously Presented) The semiconductor processing chamber of claim 4, wherein the motor is coupled to the shaft.

222038

Response to Office Action
Serial No. 10/053,296
Page 6 of 9

13 / 18. (Previously Presented) The semiconductor processing chamber of claim 4 further comprising:

a plurality of first locating devices disposed between the lid assembly and the chamber body disposed proximate a shaft of the hinge assembly; and

a plurality of second locating devices disposed between the lid assembly and the chamber body, the second locating devices disposed outward of the first locating devices relative the shaft.

14 / 18. (Previously Presented) The semiconductor processing chamber of claim 18, wherein each of the first locating devices further comprises:

a pin and a bushing having a "C" shaped cross section.

15 / 20. (Previously Presented) The semiconductor processing chamber of claim 19, wherein each of the second locating devices further comprises:

a pin and a cylindrical bushing.

16 / 21. (Previously Presented) The semiconductor processing chamber of claim 19, wherein the pin is coupled to the lid assembly.

17 / 22. (Previously Presented) The semiconductor processing chamber of claim 7, wherein the hinge assembly further comprises:

one or more mounting brackets coupled to the lid assembly;

a shaft coupled to the mounting brackets; and

one or more bearing mounts rotatably coupled to the shaft.

18 / 23. (Previously Presented) The semiconductor processing chamber of claim 22, wherein the motor is coupled to the shaft.

Response to Office Action
Serial No. 10/053,296
Page 7 of 9

19/ 24. (Previously Presented) The semiconductor processing chamber of claim 22, wherein the bearing mounts are coupled to the chamber body, a frame circumscribing the chamber body or a processing platform having the chamber body coupled thereto.

20/ 25. (Previously Presented) The semiconductor processing chamber of claim 7, wherein the lid assembly further comprises a target and a magnetron.

21/ 26. (Previously Presented) The semiconductor processing chamber of claim 13 further comprising:

a first bushing having a "C"-shaped cross section disposed in the chamber body; and

a first pin disposed between the lid assembly and the chamber body wherein a portion of the first pin mates with the first bushing.

27-28. (Cancelled)

222038